

CLAIMS

Having thus described the invention, what is claimed and desired to be secured by Letters Patent is:

1. An automatic waterline recirculator device for use on a dental unit, the dental unit containing a dental block for diverting air and water to a plurality of handpieces, an air switch, and an air, water, and suction line; the automatic waterline recirculator device comprising:

- a) a water reservoir having water level sensors;
- b) a pump;
- c) a decontaminator unit;
- d) a plurality of waterlines forming a water loop;
- e) a plurality of valves located along the waterloop; and
- f) a microprocessor coupled to the sensors, the air

switch, the plurality of valves and the pump.

2. The automatic waterline recirculator device of claim 1, wherein the air switch automatically activates the microprocessor.

3. The automatic waterline recirculator device of claim 1, wherein a first valve is positioned on the waterloop between the water reservoir and a pump; and a second valve is positioned on a drain line between the water reservoir and a suction line.

4. The automatic waterline recirculator device of claim 1, wherein the decontaminator unit is positioned on the waterloop between the dental unit and the pump.
5. The automatic waterline recirculator device of claim 1, further comprising a first three-way valve located inside the dental unit and positioned on the waterloop between the dental block, the decontaminator, and an outside waterline; and a second three-way valve positioned on the waterloop between a detachable handpiece line, the dental block and the water reservoir.
6. The automatic waterline recirculator device of claim 1, further comprising a non-detachable handpiece having a tube containing an air line, an incoming waterline and an outgoing waterline; the outgoing waterline connected to a third valve.
7. The automatic waterline recirculator device of claim 6, wherein the third valve connects the outgoing waterline of the non-detachable handpiece to the water reservoir.
8. The automatic waterline recirculator device of claim 1, wherein the water reservoir contains a number of inlets equal to a number of handpieces, each of the number of handpieces being detachable.
9. The automatic waterline recirculator device of claim 8, wherein each detachable handpiece detaches from a detachable handpiece tubing and a free end inserts into an inlet located

on the top surface of the water reservoir.

10. The automatic waterline recirculator device of claim 1, wherein water flows through the waterloop from the water reservoir through the decontaminator and into the dental unit where it is diverted into the dental block, through all of the handpiece lines, and back to the water reservoir.

11. The automatic waterline recirculator device of claim 1, wherein the decontaminator unit has a sensor that detects the level of decontaminant present in the water recirculating therethrough.

12. The automatic waterline recirculator device of claim 1, wherein the decontaminator is a chlorinator.

13. The automatic waterline recirculator device of claim 1, wherein the dental unit contains a number of handpieces equaling a number of detachable handpiece line inserts, the number of handpeices being detachable.

14. The automatic waterline recirculator device of claim 13, wherein each detachable handpiece insert line connects to a separate waterline leading to the water reservoir.

15. An automatic waterline recirculator device for use on a dental unit, the dental unit containing a dental block for diverting air and water to a plurality of handpieces and an air switch; the waterline recirculator device comprising:

a) a water reservoir having a high water level sensor and a low water level sensor;

b) a pump;

c) a decontaminator unit;

d) a plurality of waterlines forming a waterloop;

e) a plurality of valves located along the waterloop;

f) a microprocessor coupled to the sensors, the air switch, the plurality of valves and the pump;

g) a three-way valve located inside the dental block positioned between the decontaminator, a dental block, and an outside waterline.; and

h) a power source providing electrical current to the waterline recirculator device.

16. The automatic waterline recirculator device of claim 15, wherein a first valve is located on the waterloop between the water reservoir and the pump; and a second valve is located on a drain line between the water reservoir and a suction line.

17. The automatic waterline recirculator device of claim 15, further comprising a non-detachable handpiece having an air line and an incoming and outgoing waterline; the outgoing waterline connecting to the water reservoir and having a third valve located there between.

18. The automatic waterline recirculator device of claim 15, wherein a number of detachable handpieces is equal to a number

of handpiece line inserts on the dental unit; each handpiece line inserts connected to a waterline leading to the reservoir.

19. The automatic waterline recirculator device of claim 15, wherein the water reservoir has a number of inlets equal to a number of handpieces, wherein the number of handpieces detach and a free end of each detachable handpiece has a piece of tubing for inserting into its own inlet.

20. The automatic waterline recirculator device of claim 15, wherein water flows from the water reservoir, through the decontaminator, into the dental unit and block, through a set of the detachable and non-detachable handpiece tubing pieces and back into the water reservoir along the waterloop.